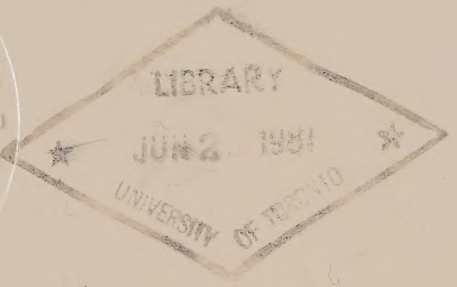
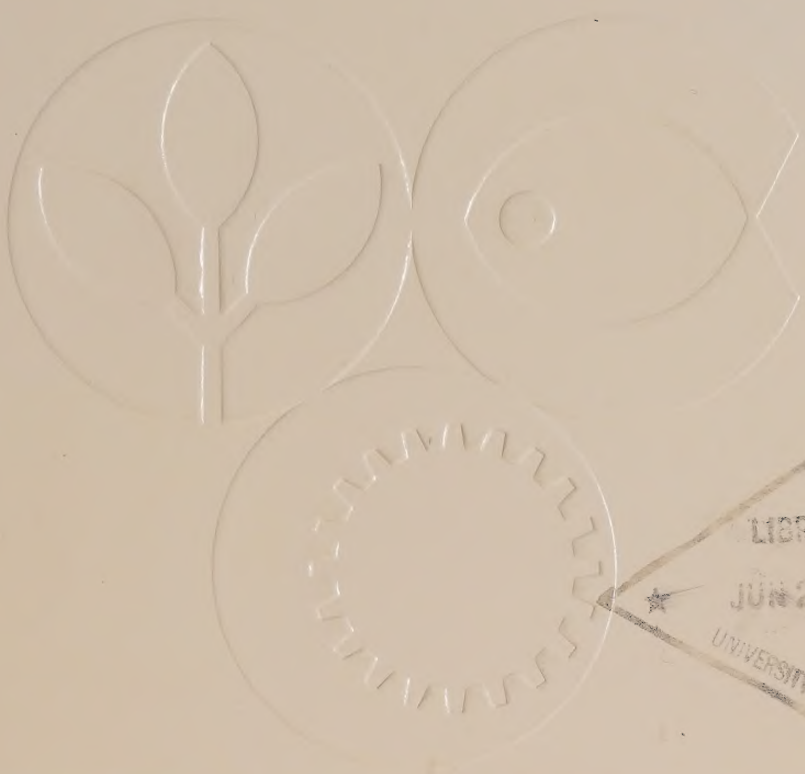


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BRUCE ENERGY CENTRE

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THE BRUCE ENERGY CENTRE

Ontario Hydro's Bruce Nuclear Power Development near Kincardine now produces 20 per cent of Ontario's electricity. By 1986 it will produce 33 per cent.

The Bruce nuclear plant has the capacity to produce steam and hot water for industry and agriculture. An imaginative concept known as the Bruce Energy Centre is being brought to a reality to capitalize on the process steam capacity of the Bruce Nuclear plant.





The Ontario Government, through the Board of Industrial Leadership and Development, has dedicated \$10 million toward the construction of a pipeline to carry steam from the Bruce nuclear power station to the Ontario Hydro property boundary. The 24" medium pressure steam pipeline and 10" condensate return will be capable of supplying up to 250,000 pounds per hour of steam.

The Ontario Energy Corporation is negotiating a contract with Ontario Hydro for the initial volumes of steam from the Bruce nuclear station. This contract will include a firm price schedule for the first five years of the agreement with provision to negotiate steam prices for subsequent periods.

An Alternative Transportation Fuel Production Complex

The Ontario Energy Corporation's plans for the Bruce have yet another dimension — the creation of an alternative fuels manufacturing complex.

In such a "Fuel-Plex", the interrelationship of various fuel production processes using a variety of feedstocks and industrial methods would lead to a large selection of different fuels for industry and agriculture.

Starting with feedstocks such as agricultural grain or waste, water, biomass, lignite, natural gas and peat, and using thermal and electrical power from the nuclear station, the complex would produce ethanol, hydrogen, methanol and other transportation fuels.

There are many possibilities! And both the production and availability of these fuels have a significant role to play in meeting the national goal — self sufficiency in crude oil by 1990. A Fuel-Plex at the Bruce provides an exciting opportunity to meeting this challenge.

A Major Advance in Energy

Ontario has already taken significant steps toward increasing the amount of energy produced within the Province. By 1995, it is estimated Ontario will produce 37.5 per cent of its own energy, compared with 23 percent today.

Energy available from Ontario's nuclear stations is a major advance towards increased self-sufficiency. Energy for Ontario's industry and agriculture. Secure energy at reasonable prices. The Bruce Energy Centre is one such advance.

The Bruce Energy Centre has evolved from a proposal to use waste heat from the moderator cooling water of Ontario Hydro's Bruce power station to heat greenhouses and a fish farm. To develop this concept, the Bruce AgriPark Joint Venture was formed in 1979 – comprised of the Ontario Energy Corporation, Huron Ridge Ltd., The Consumers' Gas Co., TransCanada PipeLines Ltd., Anderson Flax Products Ltd. and Weston Energy Resources Ltd.

The Joint Venture's findings on the availability of low cost steam at the Bruce resulted in the broader concept of an energy centre that would capitalize on all forms of energy available at the site.

A pipeline transportation system was identified early as a primary concern, and an organization known as the Bruce Thermal Utility was established. Since then the need for an Industrial Park at the Bruce was identified as was the capacity to encourage industries to locate near the Bruce's abundant supply of thermal energy.

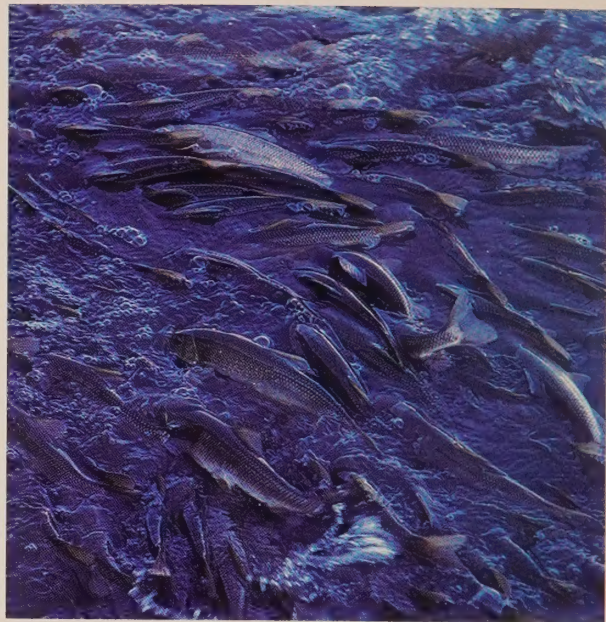
Planning for Growth

The Bruce Energy Centre will include an industrial and agricultural park. Some 2,000 acres have already been optioned just outside Ontario Hydro's property for development.

Apart from its proximity to the Ontario Hydro's nuclear plant, the Bruce area has many features that make it an ideal location for an energy park. A key factor, of course, is the strong commitment which the Bruce County Council and the surrounding Township Councils have to nuclear power and industrial development. The enthusiasm of the local governments and residents is matched by a number of industries who were surveyed in August 1980 about their interest in locating at the Bruce.

Nearby towns are well-equipped to handle significant growth. And the local labour market is expected to be a continuing source of both skilled and unskilled labour.

The area is well served by both road and rail transportation. Water transportation is not being overlooked. In this connection, the Government of Ontario, through its various ministries and the Ontario Energy Corporation, is working closely with Public Works and Transport Canada to establish docking facilities in the vicinity.





Experimental Greenhouse now in Production

Agricultural activities aimed at taking advantage of the relatively inexpensive thermal energy available at the Bruce are already well underway.

A one-acre experimental greenhouse initiated by the Bruce AgriPark Joint Venture has been in production since 1979, and future plans call for up to 150 acres of greenhouse sustained year-round by heat from the power station. A fish farm complex is also envisaged.

This large scale agricultural development will be phased over a number of years and will be structured so that family size operation of 3-4 acre greenhouse modules are available. In this way the Agricultural Park will make a significant contribution to Ontario's traditional greenhouse industry and to the replacement of imported produce through the innovative and efficient use of energy.

Steam for Industrial Use

The Bruce nuclear plant is unique in that its reactors are capable of producing large quantities of process steam not only for the generation of electricity but also for the production of heavy water. Four heavy water plants were originally designed, but a slowdown in the construction of two of these heavy water plants has resulted in 10 million pounds of steam per hour eventually being available for industrial purposes — an amount that corresponds to about one-third of Ontario's current industrial steam requirements.

Because of assured indigenous Ontario uranium resources and relatively low fuelling costs, nuclear-generated steam offers industry an alternative energy supply with the advantages of long-term security and relatively inflation-proof energy costs. At the point of use this steam is expected to compare favourably with steam produced from the burning of natural gas.

**Further information**

For further information on the Bruce Energy Centre you may contact any member of the Bruce AgriPark Joint Venture listed within.

Ontario Energy Corporation
1200 Bay Street, 11th floor
Toronto, Ontario M5R 2A5
Telephone (416) 965-6276



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Corporation